From: Snyder, Joan
To: Lori Cora/R10/USEPA/US@EPA
Subject: RE: Further Question on ARARs Clarification
Date: 03/31/2010 05:51 PM

Thanks, Lori, for this thorough response. I'll be kicking this one back to our risk assessors and then getting back in touch if they feel further conversation is warranted.

Take care.

--Joan

-----Original Message-----
From: Cora.Lori@epamail.epa.gov [mailto:Cora.Lori@epamail.epa.gov]
Sent: Wednesday, March 31, 2010 1:36 PM
To: Snyder, Joan
Cc: agladstone@davisrothwell.com; Chris.Reive@jordanschrader.com; david.ashton@portofportland.com; Albrich, Elaine; gerald.george@pillsburylaw.com; jbenedic@chbh.com; jbetz@ci.portland.or.us; jim.mckenna@portofportland.com; jkincaid@chbh.com; john.ashworth@bullivant.com; Snyder, Joan; jworonets@anchorqea.com; kfavard@groffmurphy.com; kims@tonkon.com; kpeterson@cascadialaw.com; krista.koehl@portofportland.com; Burkholder Kurt; ldunn@riddellwilliams.com; Lparetchan@perkinscoie.com; max@tonkon.com; mwschneider@perkinscoie.com; nklinger@ci.portland.or.us; NvanAelstyn@bdlaw.com; Paul.Hamada@ConocoPhillips.com; pdost@pearllegalgroup.com; rjw@nwnatural.com; sparkinson@groffmurphy.com; sriddle@pearllegalgroup.com; tgold@sjzlaw.com; willette.a.dubose@conocophillips.com; wjoyce@sjzlaw.com; BURKHOLDER Kurt; ANDERSON Jim M; Humphrey.Chip@epamail.epa.gov; Blischke.Eric@epamail.epa.gov; Koch.Kristine@epamail.epa.gov
Subject: Re: Further Question on ARARs Clarification

Hello, Joan. I have consulted with the Kurt and Jim on your questions about the state ARAR/TBCs. Here are our responses.

1st Question- Should DEQ's Sediment Bioaccumulation Guidance be a TBC? Yes, the LWG submitted a draft BRA, but their risk assessment didn't include preliminary remediation goals (PRGs) based on the food web model (FWM). The LWG stated numerous times in their draft BRA that their FWM would be submitted at a later date. We're waiting for that FWM. Two of the most important things the LWG's FWM will do is to consider bioaccumulation & back-calculate sediment PRGs from acceptable fish tissue concentrations. DEQ's Sediment Bioaccumulation Guidance contains risk-based concentrations (i.e., PRGs) that were developed using a general FWM (actually biota-sediment accumulation factors, BSAFs). The risk-based concentrations in our guidance are generic values that can be used for screening or to make cleanup decisions. Until EPA accepts the LWG's FWM & associated PRGs, DEQ's Sediment Bioaccumulation Guidance needs to stay on the list while the FS is developed to see whether the LWG's FWM is acceptable or covers all PH chemicals or if its determined that the guidance brings something more to the table for cleanup.

2nd Question- Is DEQ's risk assessment process essentially equivalent to EPA's process? I understand your comment as saying that since the PH risk assessment was performed under EPA process & not DEQ's process…, Oregon acceptable risk level & hot spots rules are out of context & shouldn't be considered ARARs. In your e-mail, you say the LWG provided specific examples of why Oregon acceptable risk levels & hot spot rules could not be applied to the output of the EPA-directed risk assessment. I assume those "specific examples" are in the LWG's 2/1/10 e-mail (with the attached "Table 1- ARAR Questions for February 4, 2010 Meeting with EPA"). The LWG's 1st specific example is that Oregon law allow the use of probabilistic risk assessment. EPA discussed using probabilistic risk assessment process with the LWG. EPA did not prohibit the LWG using probabilistic methodology. The LWG's 2nd specific example is that Oregon defines acceptable risk levels for populations of ecological receptors differently than EPA. Oregon's actual definition of acceptable risk may be more specific than EPA's, but they are essentially the same. That is, population-level protection for non-threatened-or-endangered (T&E) species, & protection of individual T&E-species receptors. The LWG's 3rd specific example is Oregon's 10-6 risk level applies only to individual carcinogens, in the case of PCBs meaning individual congeners. Joan is correct. DEQ's process for considering carcinogenic risk from PCBs is that if you have congener data, you apply the acceptable risk level for individual carcinogens to individual PCB congeners. However, if you have only total PCB data (Aroclors), then you apply the acceptable risk level for individual carcinogens to the total concentration, with the assumption that the risk could be driven by a single congener. DEQ has consistently applied these approaches for the last ten years. The LWG's 4th & final example is that human exposure assumptions would be different under Oregon law as compared to those directed by EPA. The difference shouldn't be very significant for the PH project. The bottom line is that Oregon's risk levels and hot spot criteria are promulgated environmental standards and criteria related to selecting a protective cleanup of releases of hazardous substances and under the NCP are applicable or relevant and appropriate to the Portland Harbor cleanup.

Let us know if you need any further clarification.

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Further Question on ARARs Clarification

Snyder, Joan
to:
Lori Cora, Burkholder Kurt
03/09/2010 04:40 PM

Cc:
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Lori and Kurt,

I've been tasked with following up with you on two items relating to State ARARs in Lori's February 10 letter.

The first of these is a question with respect to the designation of DEQ's 2007 Guidance for Assessing Bioaccumulative Chemicals of Concern in Sediment as a TBC. In the LWG request for clarification on February 1, we asked for clarification as to what specifically EPA believed should be considered that was not already considered. In response, you explained that:

> "EPA discussed with DEQ the LWG's requested clarification. By its terms, the DEQ guidance may inform cleanup levels in addition to risk assessment. For example, we envision DEQ's guidance could be used for any possible chemicals not considered in the Portland Harbor food web model."

We are not sure we understand what this means and, because this guidance document applies to screening and risk assessment, and we have already submitted to EPA our draft risk assessments, we think it is important to make sure we understand exactly what you mean.

DEQ's 2007 Guidance for Assessing Bioaccumulative Chemicals of Concern in Sediment:

> "describes a process used by the Oregon Department of Environmental Quality (DEQ) to evaluate chemicals found in sediment for their potential contribution to risk as a result of bioaccumulation. It is presented here as an example of a method that others may use for that purpose, if appropriate. Its use, however, is not required." (Guidance, page 1)

Our risk assessors feel that they have used an equivalent process and that these steps have therefore already been fully considered. Specifically, although the guidance focuses mostly on screening steps based on sediment screening level values (SLVs), it also explains what to do after the comparison to SLVs:

> "If the BCOI concentration is still greater than its site-specific SLV, do one of the following:
>
> "a. Evaluate the feasibility of cleaning up areas exceeding SLV levels to the site-specific SLV or to ND, whichever is higher, or, for a naturally occurring chemical, to its background concentration ***
>
> "or
>
> "b. Collect data on the concentration of BCOIs in fish or benthic invertebrate tissue using one of the following methods, and then continue with Step 5.
>
> "i. Collect existing tissue data from an area that is applicable to your site (e.g., has appropriate fish home range and analytes) or data from fish caught or benthic invertebrates collected at your site for this purpose; or
>
> "ii. Perform laboratory or in situ bioaccumulation tests on sediment from the site.
>
> "5. Compare the estimated or measured concentration of each BCOI in fish or benthic invertebrate tissue to appropriate acceptable tissue levels (ATLw and ATLh) or critical tissue levels (CTL). If the concentration is lower, no

> further action is required with respect to bioaccumulation for that COI and you should continue with a regular toxicity evaluation. If the BCOI concentration is greater than the ATL or CTL, the COI must be considered a chemical of potential concern (COPC) with respect to bioaccumulation and must be cleaned up to a bioaccumulation-based level or to ND, whichever is higher; or, for a naturally occurring compound, to its background concentration."

The guidance document applies to screening and risk assessment steps, which have already been completed and submitted in draft to EPA. The LWG doesn't see any issue here, because its Human Health and Ecological risk assessors believe they have performed the equivalent of the steps quoted above in the HHRA and the BERA and in the development of the sediment PRGs and that this approach has therefore already been fully considered. Does EPA have a different view?

Our second issue regarding State ARARs is really a comment relating to the Oregon Environmental Cleanup Law, under which EPA identified both the acceptable risk levels and hot spot rules as ARARs. With respect to both of these, the LWG agreed they were ARARs but expressed its understanding that any particular criteria or requirement associated with these rules would be applied in the context of the Oregon Cleanup Law and implementing rules as a whole. By that we meant that you need to compare apples to apples--when applying these Oregon requirements as ARARs, you need to apply them to the output of a risk assessment as it would be done under Oregon law. In the LWG request for clarification, we provided specific examples of why those criteria could not be applied directly to the output of the EPA-directed risk assessment because the EPA risk assessment was done differently, and likely more conservatively, than it would have been done under Oregon law—essentially apples and oranges.

The response you provided was that "DEQ considers the risk assessment performed by the LWG to be generally consistent with what DEQ would require under its program, and adequate for determining whether acceptable risk levels are exceeded at the site." We don't disagree that the EPA risk assessment is adequate under Oregon law. However, we do believe it is likely more conservative, which causes the apples and oranges problem if you try to apply the acceptable risk criteria or the hot spot rules directly to the output of the EPA-directed risk assessment.

We do not think this is an insurmountable problem. Our technical teams are having discussions on risk and hot spots and trying to work with the output of the EPA directed risk assessment. We think it is most productive for these conversations to continue on the technical level. However, when we get to the point in the future of trying to determine what it means to apply Oregon acceptable risk rules or Oregon hot spot rules as ARARs, we believe that discussion will need to come back to an apples-to-apples comparison. We are hoping that the technical discussions will help us understand how to best make those comparisons.

Thanks for your input on these issues.

Joan P. Snyder
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